COMPARISON OF WAVELENGTH DISTRIBUTION OF UV SOURCES

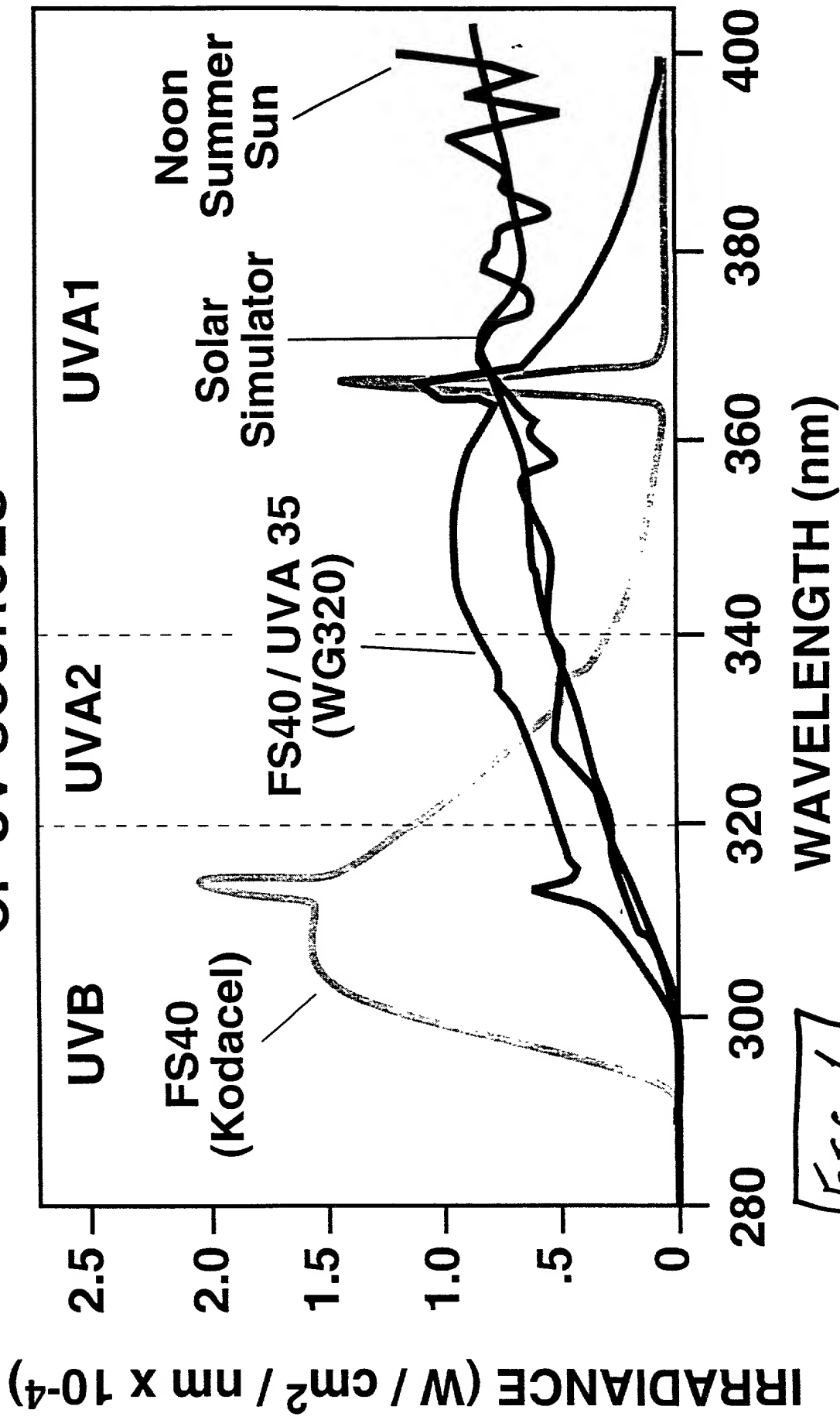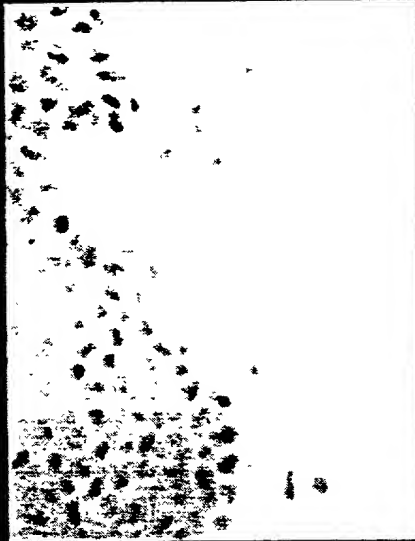Fig. 1

FIG. 2A GE300650

SOLAR SIMULATED LIGHT INDUCES cJUN
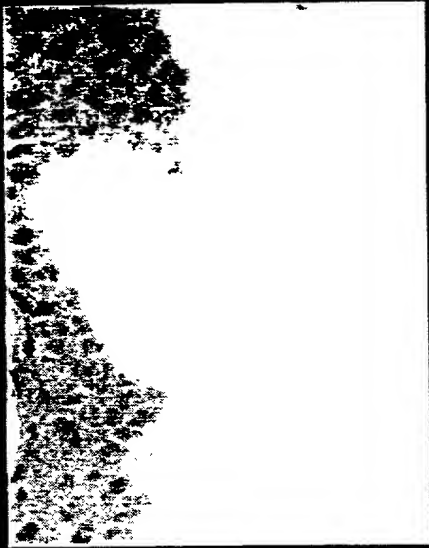# IN HUMAN SKIN *IN VIVO*

No UV

.1MED

.5MED

1MED

2MED

FIG. 20B

SOLAR SIMULATED LIGHT ACTIVATES NF-κB
IN HUMAN SKIN *IN VIVO*
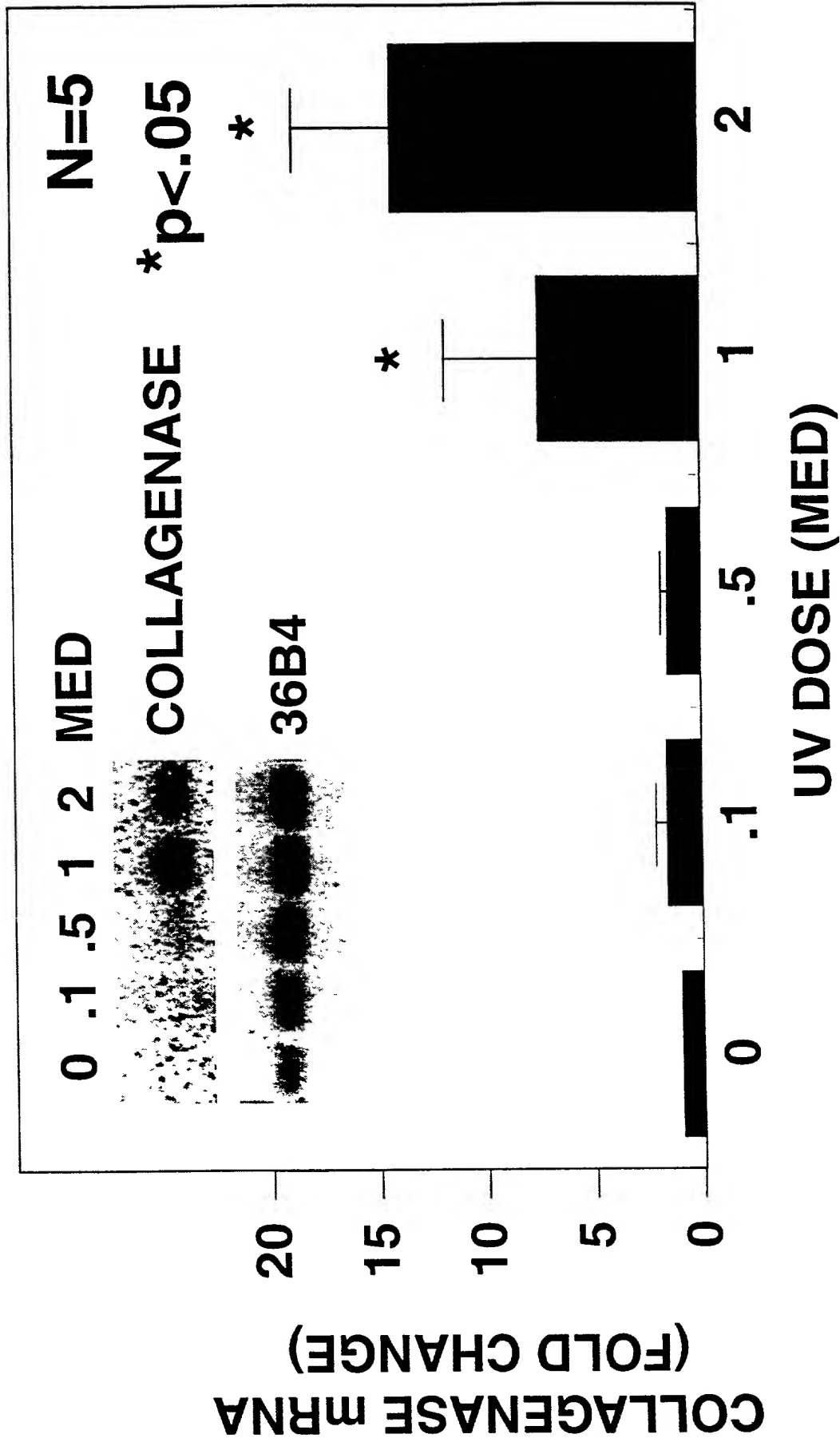
No UV   .1MED   .2MED

1MED   2MED

Fig. 3A

SOLAR-SIMULATED UV INDUCTION OF COLLAGENASE IN HUMAN SKIN *IN VIVO*

FIG. 3B

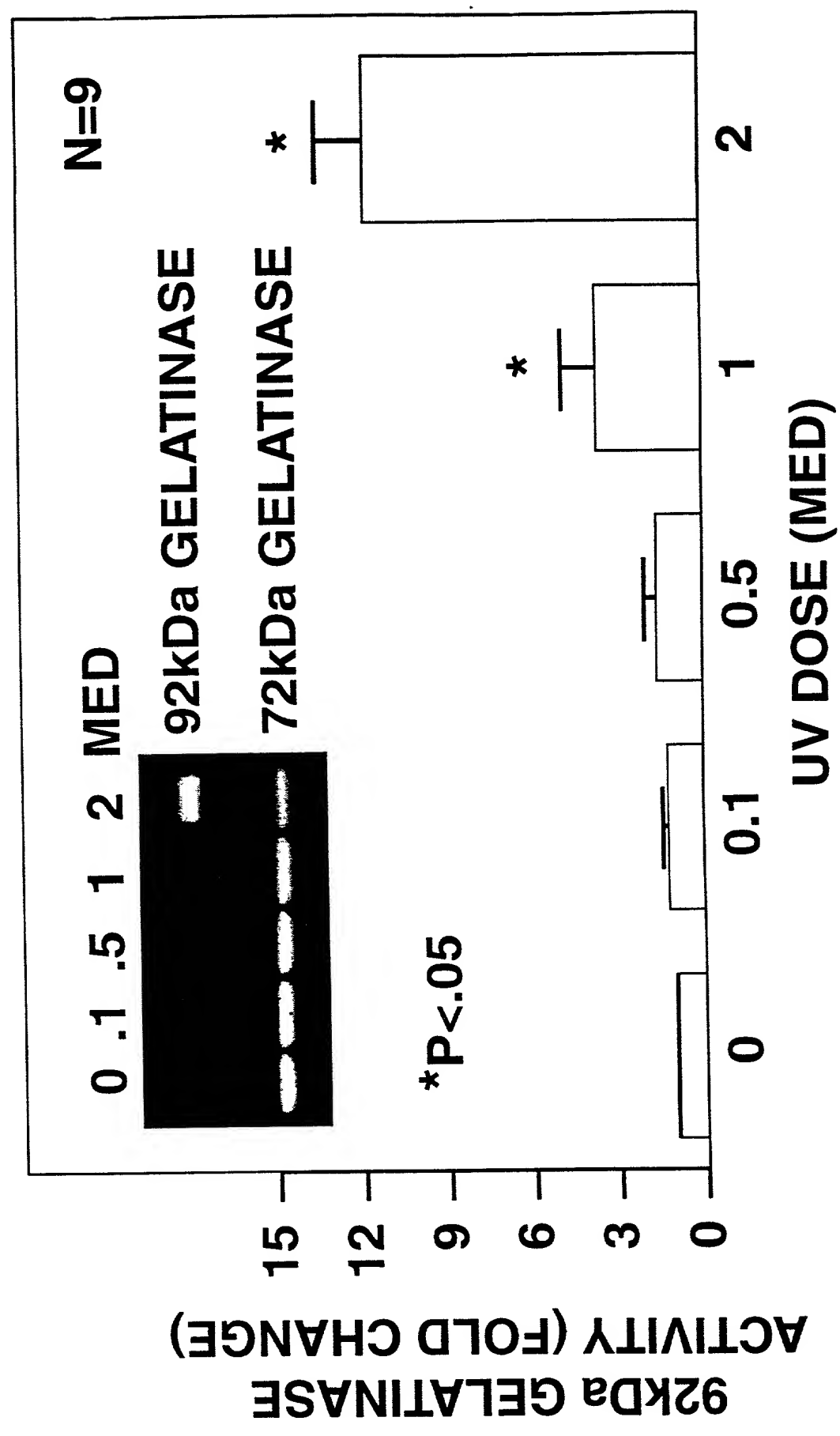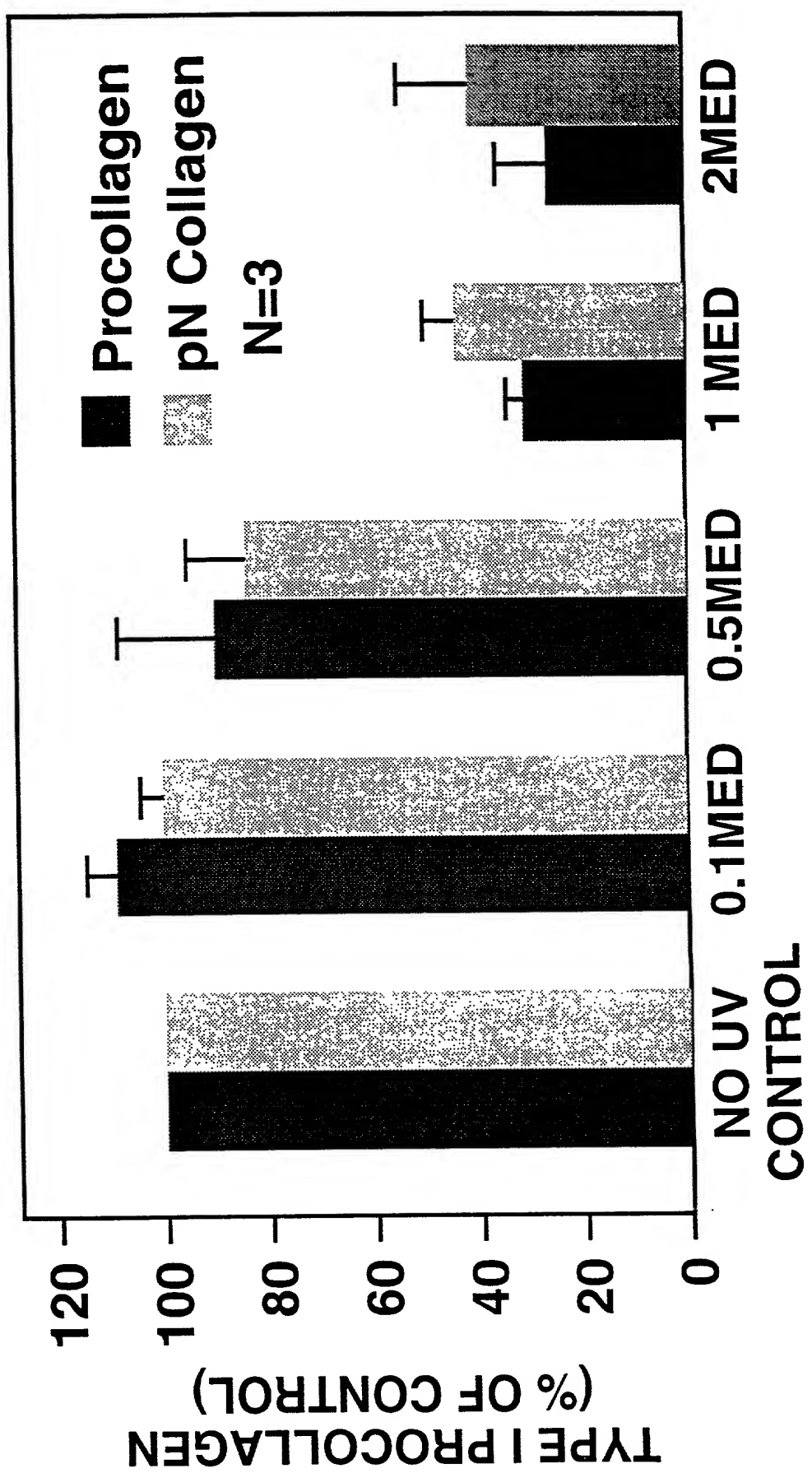DOSE DEPENDENCE FOR SOLAR-STIMULATED UV INDUCTION OF 92kDa GELATINASE ACTIVITY IN HUMAN SKIN IN VIVO

Fig. 3C

SOLAR SIMULATED UV REDUCES TYPE I
PROCOLLAGEN IN HUMAN SKIN *IN VIVO*

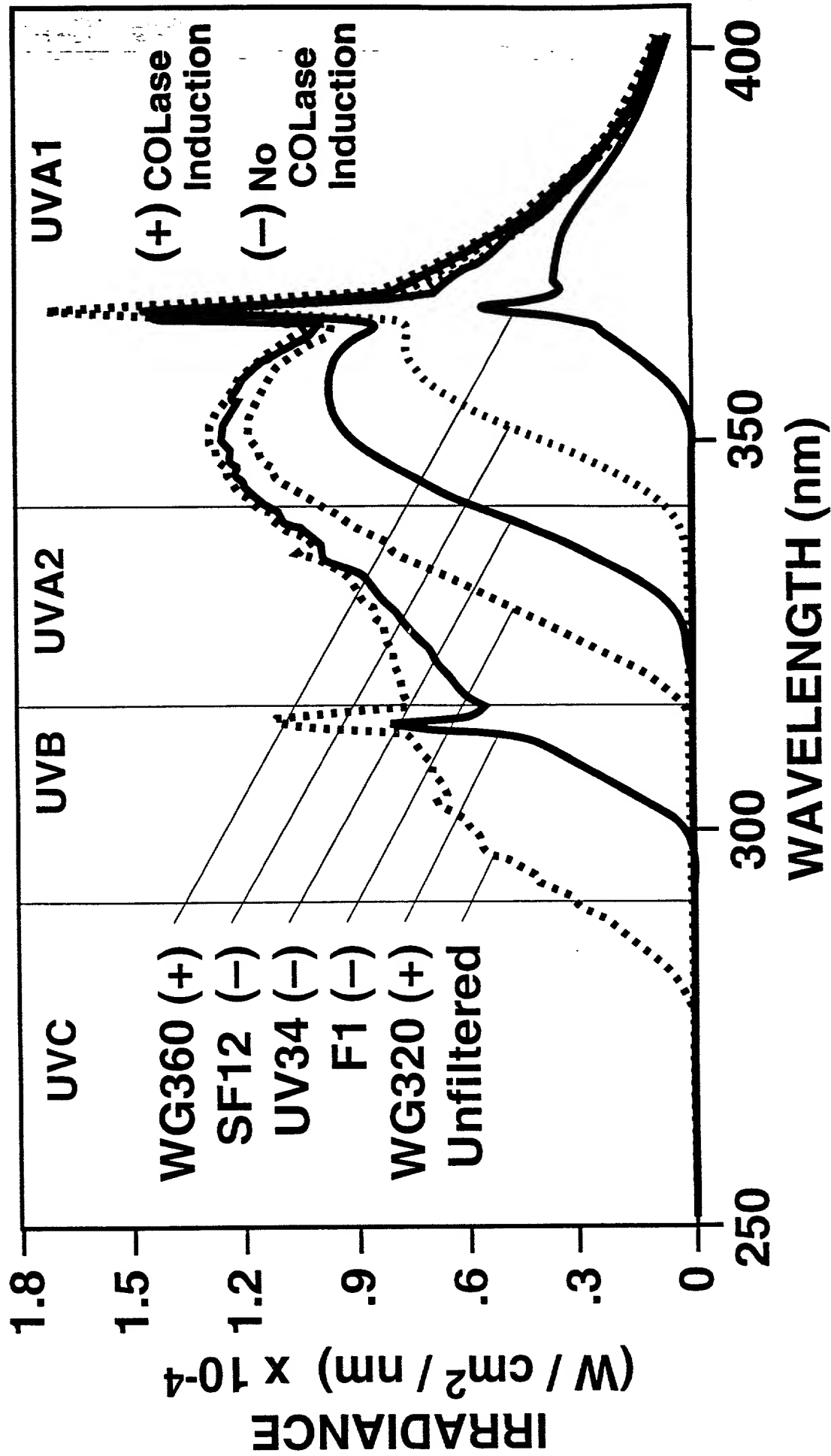# UVB & LONG UVA INDUCE COLLAGENASE (MMP-1) mRNA IN HUMAN SKIN *IN VIVO*

Fig. 4A

CHARACTERISTICS OF UV FILTERS USED TO DETERMINE WAVELENGTH DEPENDENCE OF COLLAGENASE INDUCTION IN HUMAN SKIN *IN VIVO*
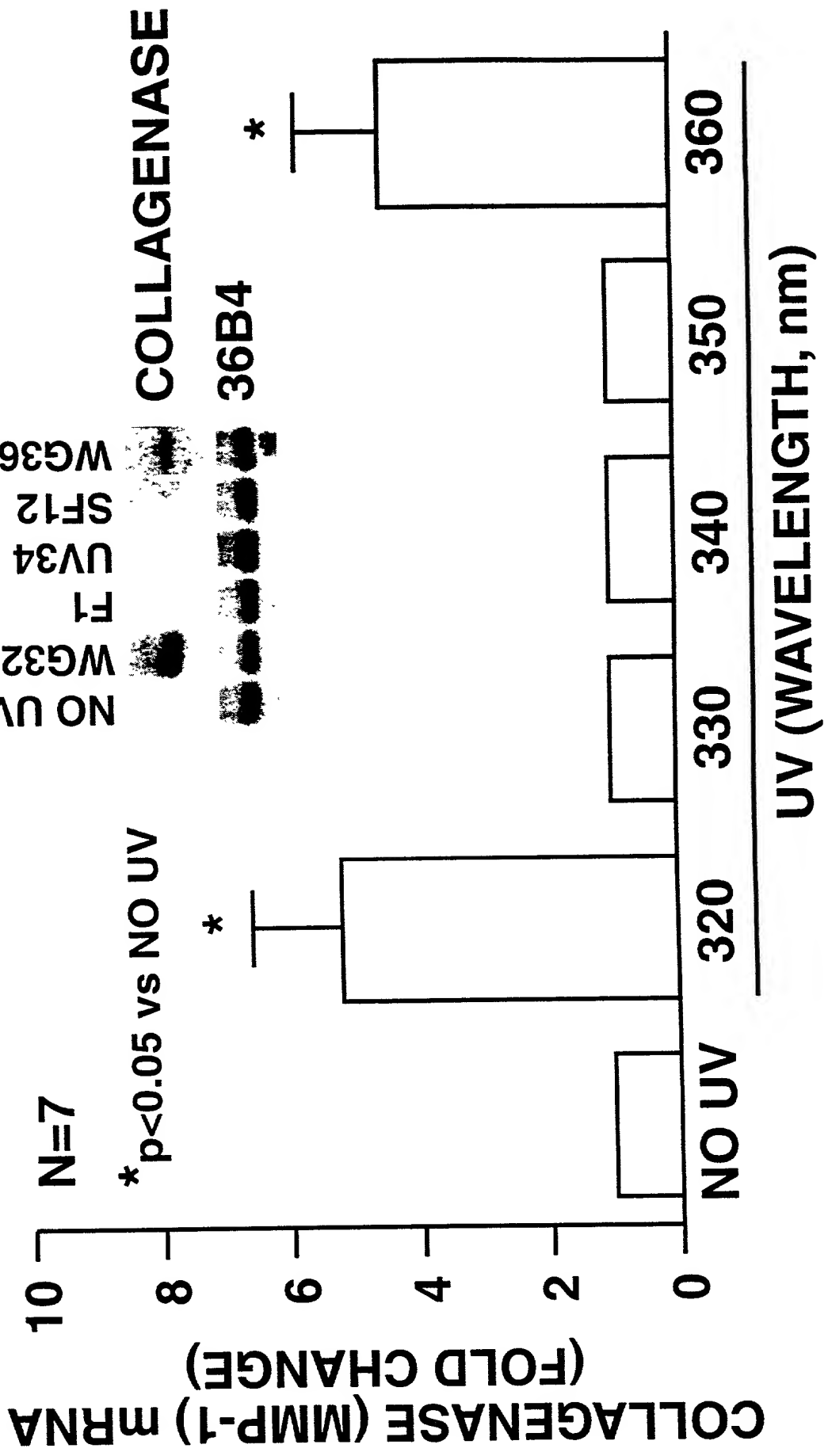
SPECTRAL OUPUT OF SOLAR SIMULATOR WITH MONOCHROMATOR:
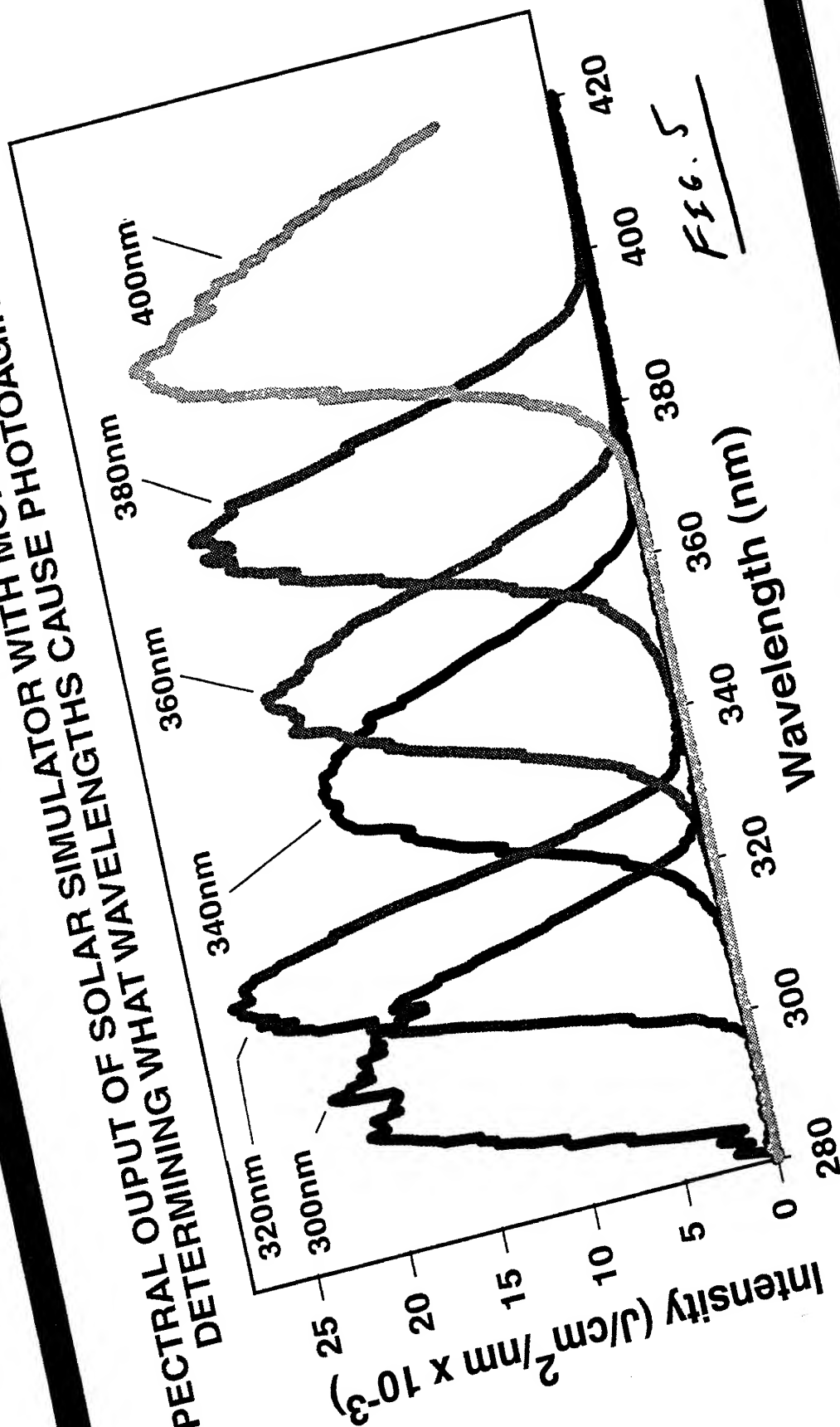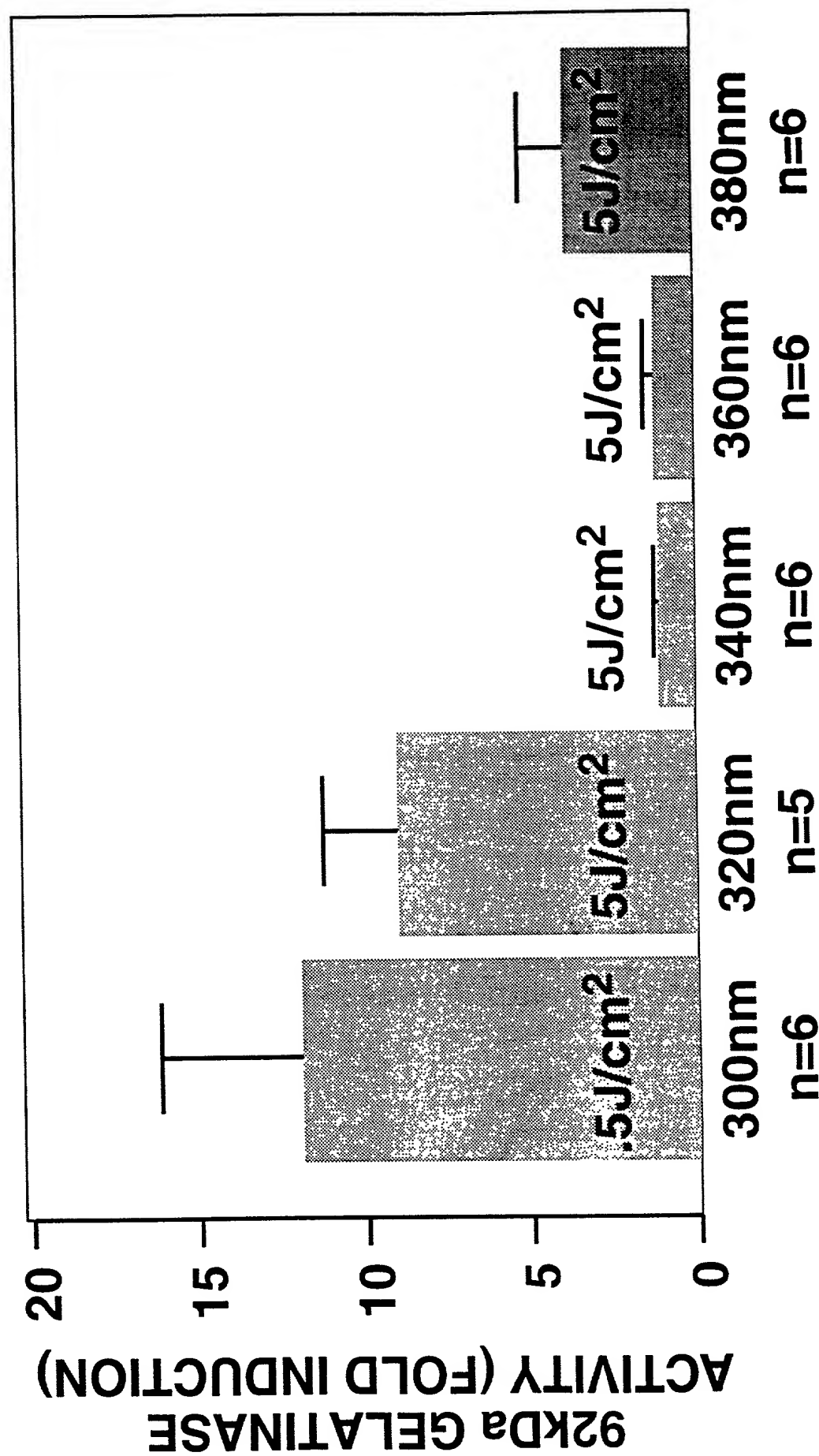DETERMINING WHAT WAVELENGTHS CAUSE PHOTOAGING

FIG. 5

FIG. 6A

92kDa GELATINASE ACTIVITY INDUCED BY UVB (300-320nm) & LONG WAVELENGTH UVA1 (380nm): MONOCHROMATOR

UV ACTION SPECTRUM FOR INDUCTION OF
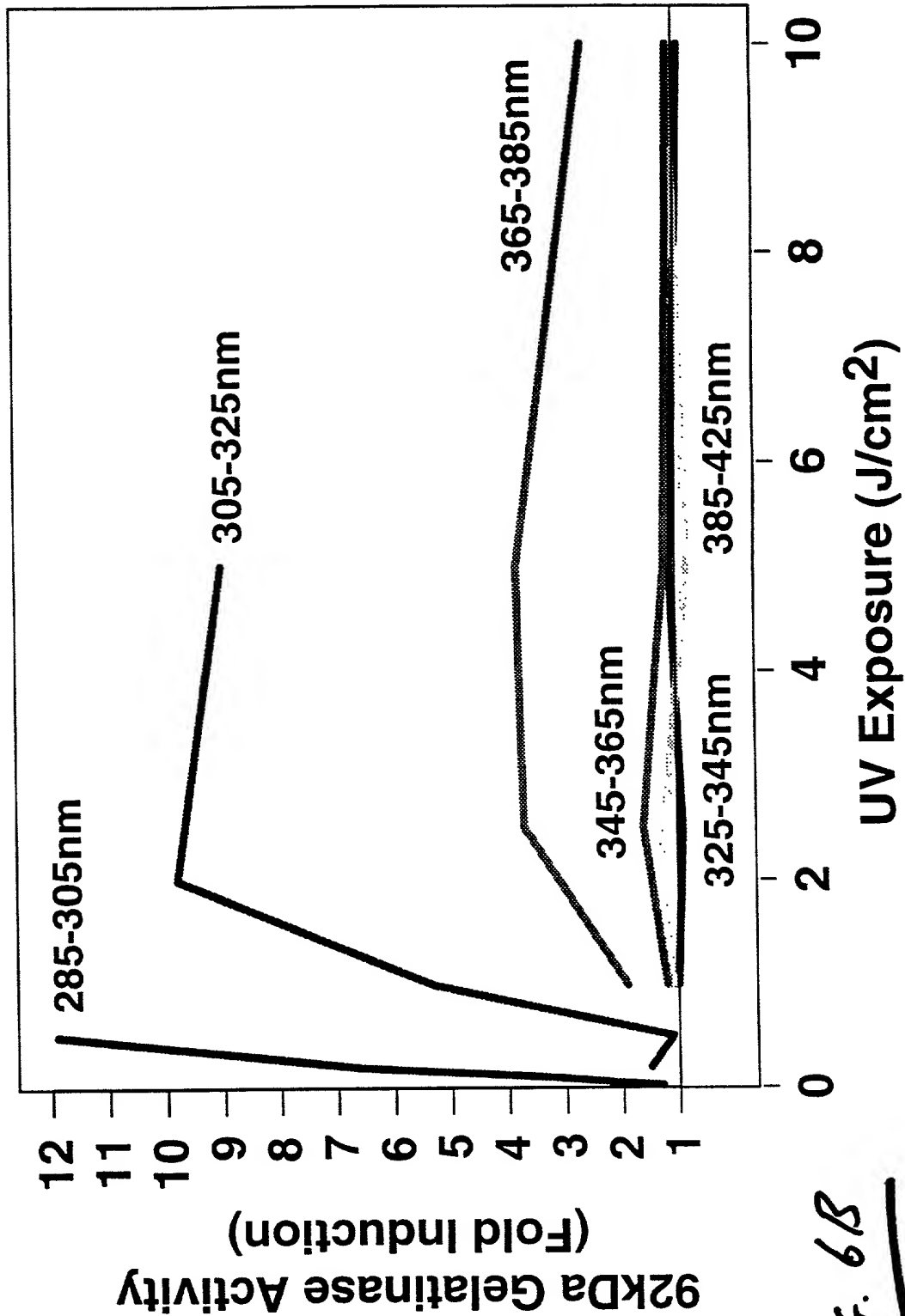## 92kDa GELATINASE (MMP-9) ACTIVITY

FIG. 9B

Fig. 6C

RELATIVE EFFECTIVENESS OF UV WAVELENGTH TO INDUCE
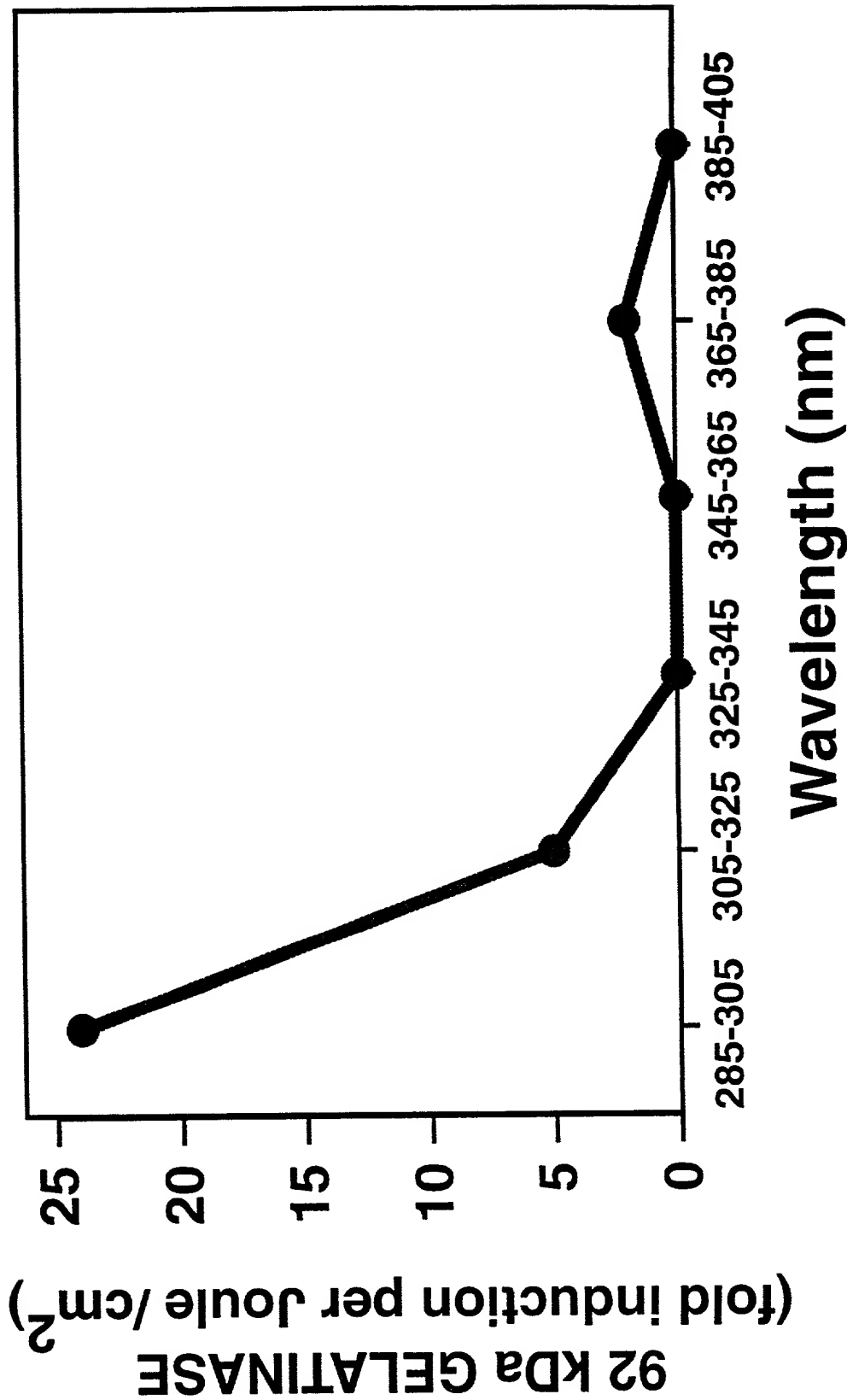## 92 kDa GELATINASE ACTIVITY IN HUMAN SKIN _IN VIVO_

Fig. 7

EFFECTIVE CONTRIBUTION OF UV WAVELENGTHS TO INDUCTION OF 92kDa GELATINASE ACTIVITY BY SOLAR-SIMULATED UV IN HUMAN SKIN *IN VIVO*

1MED

UVB (285-305) 0.6%

UVA (365-385) 45.4%

UVB (305-325) 54%

2MED

UVB (285-305) 0.8%

UVA (365-385) 29.4%

UVB (305-325) 69.8%

3MED

UVB (285-305) 1.1%

UVA (365-385) 26.6%

UVB (305-325) 72.3%
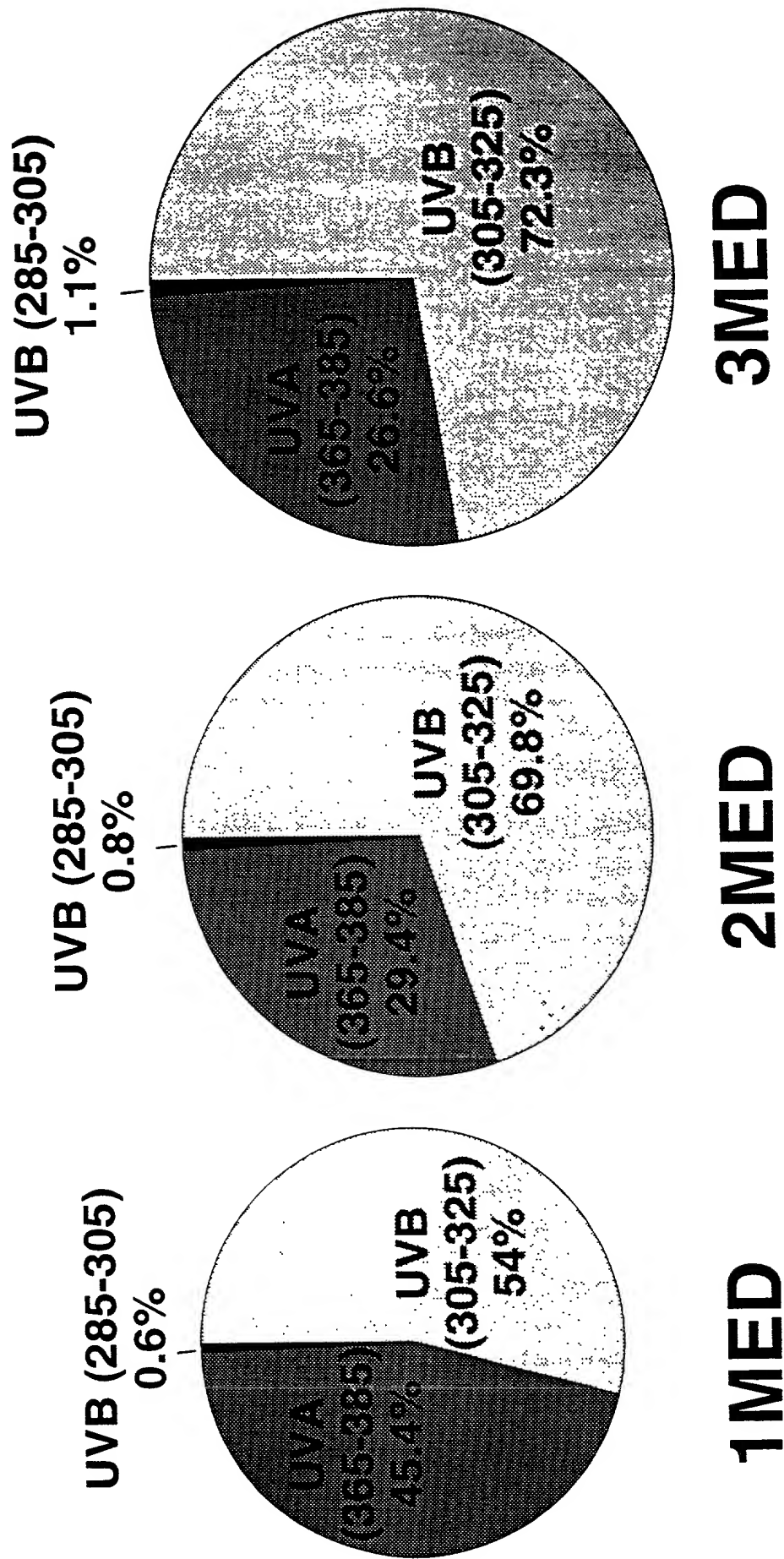
Fig. 8

SUNLIGHT VARIABILITY

Irradiance (watts/nm/cm2)

10^{-4}

10^{-5}

10^{-6}

UVB

UVA2

UVA1

Noon

Early morning /
Late afternooon

300   320   340   360   380   400

Wavelength (nm)

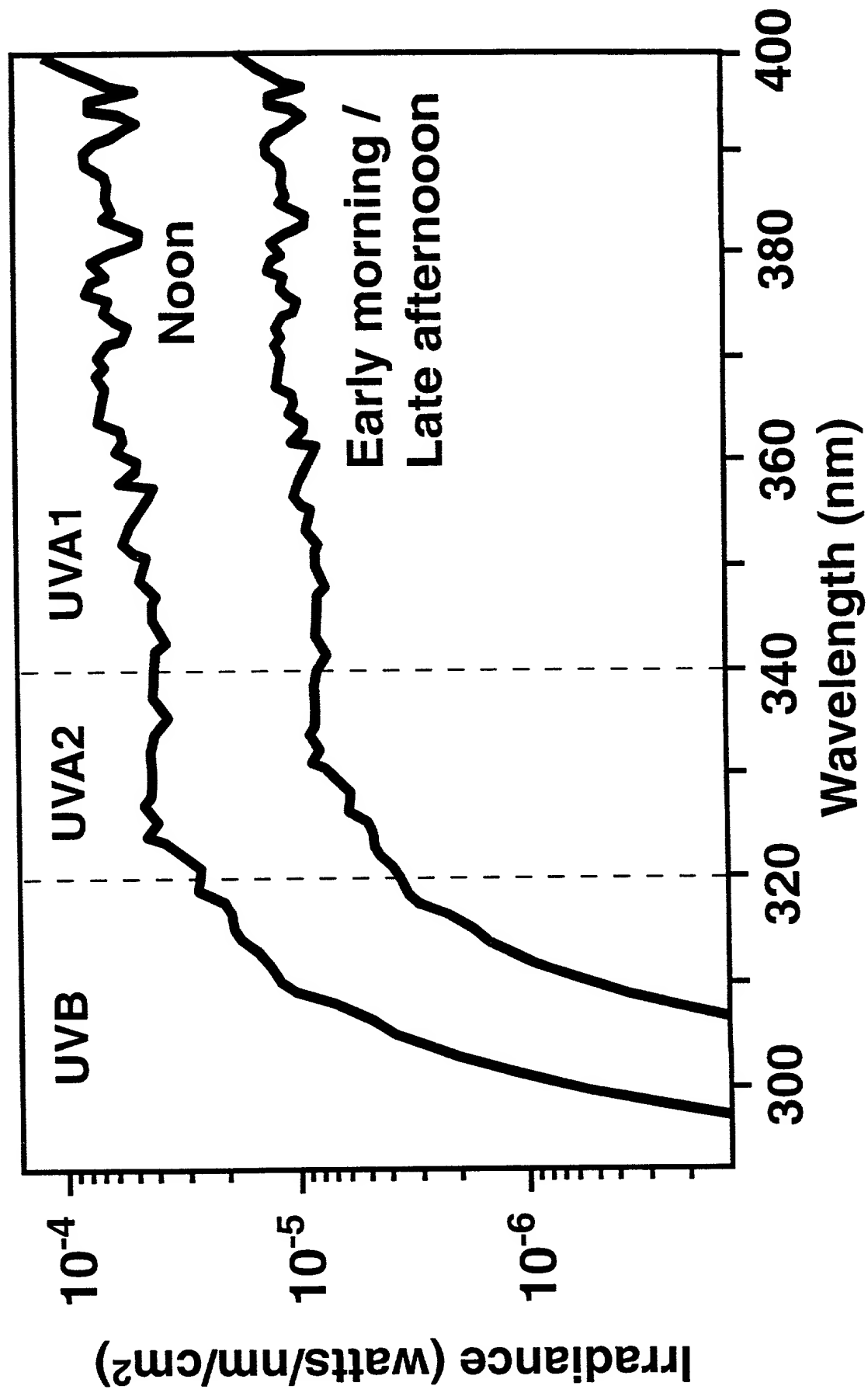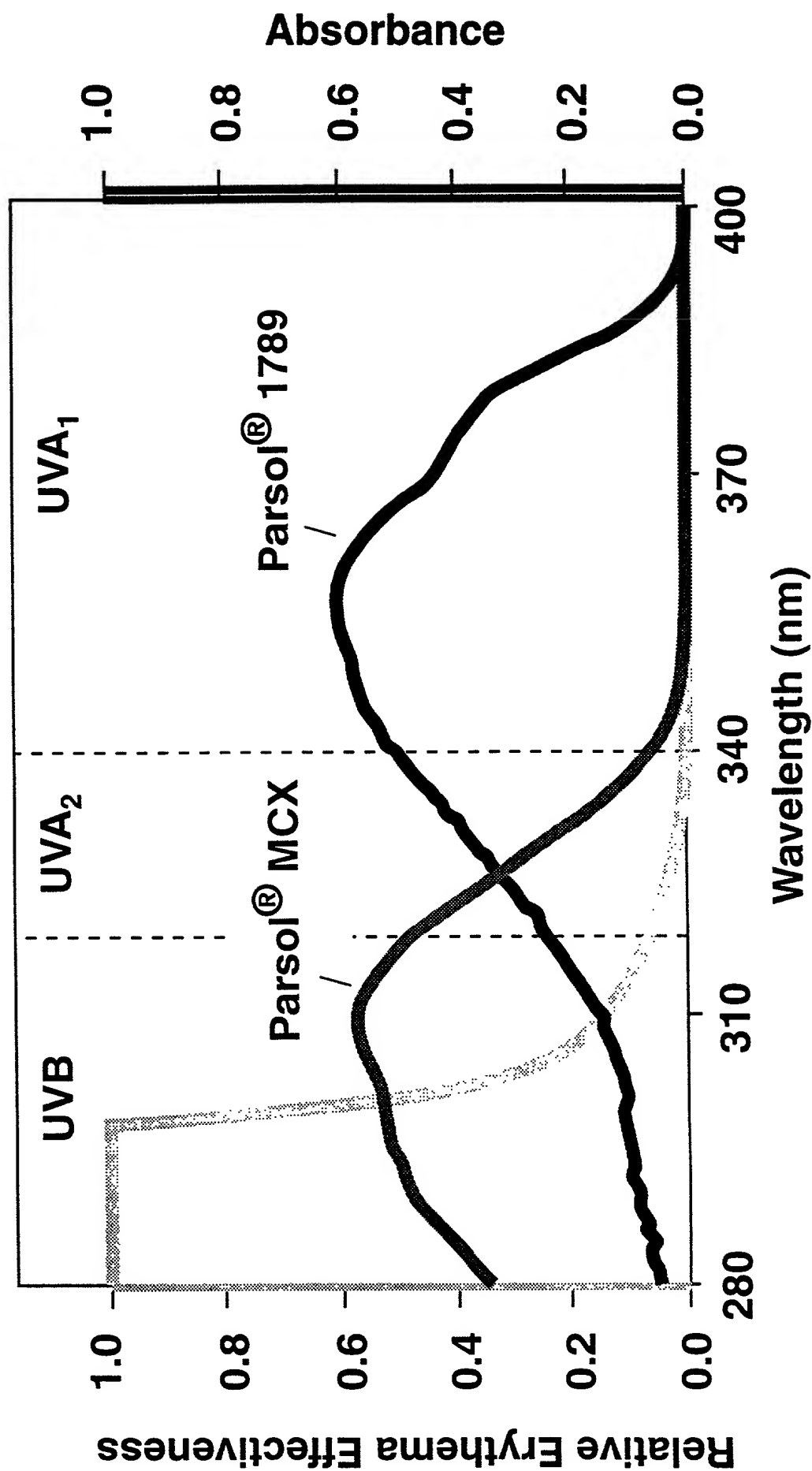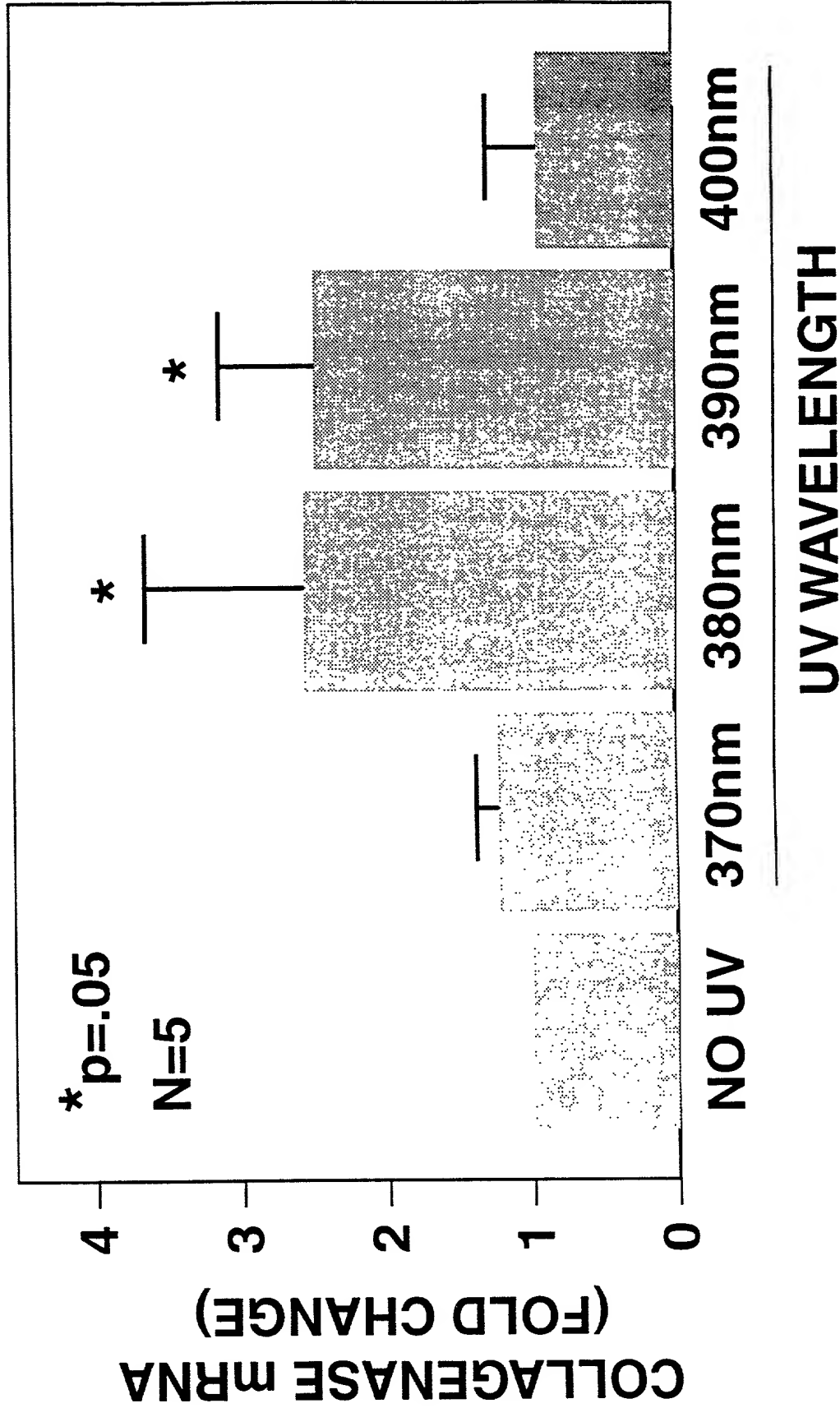Fig. 9

ABSORPTION SPECTRA OF PARSOL 1789 & MCX
IN ABSOLUTE ETHANOL

Fig. 10

UVA1 WAVELENGTH DEPENDENCE FOR INDUCTION
OF COLLAGENASE mRNA IN HUMAN SKIN *IN VIVO*

*p=.05

N=5

COLLAGENASE mRNA
(FOLD CHANGE)

NO UV   370nm   380nm   390nm   400nm

UV WAVELENGTH

UVB/A2 Wavelength Dependence for Induction of Collagenase mRNA in Human skin in vivo

	NO UV	300	310	320	330	340	350	360	
	3.53E+02	1.05E+05	6.70E+04	2.84E+02	5.05E+02	3.80E+02	3.09E+02	mean
	1.31E+02	2.72E+04	8.96E+04	6.34E+01	5.71E+01	2.86E+01	1.13E+02	1.38E+02	sem

Fig. 11

Collagenase mRNA $\left(\dfrac{NUMBER}{100\ ng\ total\ RNA}\right)$